

REMARKS

Summary of Office Action

Claims 1-12 are pending.

Claim 3 has been objected to because the claim language allegedly is unclear.

Claims 7-12 have been rejected under 35 U.S.C. § 101 because the invention allegedly is directed to non-statutory subject matter.

Claims 1-12 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Summary of Response

In order to clarify the meaning of claim 3, Applicants have amended claim 3 to track the language of claim 9.

Applicants have amended claim 7 in response to the Examiner's § 101 rejection. Amended claim 7 now requires that the program reside on a "computer-readable medium" as per the Examiner's suggestion.

Applicants have amended claim 1 to comply with § 112, second paragraph. Applicants respectfully submit that the amendment and following remarks traverse the § 112 rejection.

Applicants' Response

As a preface to the remarks below, the discrete examples provided herein are offered solely as an explanatory vehicle to aid in the Examiner's understanding of the relevant claims and are not intended to have a limiting effect upon either claims 1 or 7.

The Examiner rejected claims 1 and 7 under § 112, second paragraph, alleging that “it is unclear as to how the step of calculating displacements of the two underlying points in transit of the two stratigraphic surfaces of the reference realization factor into the interpolation step disclosed in claims 1 and 7.” (Office Action, p. 3).

In response, Applicants have amended claim 1 to more accurately reflect the invention by restructuring claim 1 (i.e., renaming step (d)(iv) as step (e)). This amendment has been made in order to clarify that the step of interpolating the intermediate planes, currently amended step (e), is not a sub-step of calculating the displacement, namely, step (d), but is instead a separate step of its own.

More specifically, the sub-steps of step (d) of (i) “determining,” (ii) “calculating,” and (iii) “selecting” result in the identification of points collectively comprising planes G^k_1 and G^k_n . These planes are the meshed descriptions of surfaces S^k_1 and S^k_n , respectively, of realization R^k that are computed from the reference realization R^0 , surfaces S^0_1 and S^0_n , and realization R^k .

Currently amended step (e) requires “determining planes of the meshed description by an interpolation between homologous points of the planes of the meshed description describing the particular surfaces of the realization.” The product of step (e), the resulting intermediate planes, i.e., G^k_2 to G^k_{n-1} , are interpolated during this step from the planes G^k_1 and G^k_n determined by step (d). However, the number of intermediate planes and the type of interpolation are not determined by step (d). (*See* ¶ [0054]). Thus, although step (e) explicitly depends on step (d) in that data generated in step (d) is used in computations in step (e), it should now be apparent that calculating the displacement in step (d) is not used to define the number of planes created by interpolation in step (e).

Similarly, claim 7 reflects that the displacement calculation embodied in limitation (b) is carried out in a separate module from the interpolation calculation embodied in limitation (c). Again, the number of intermediate planes and the type of interpolation are not determined by the displacement calculation embodied in limitation (b).

Applicants submit that the amendments to the specification have introduced no new matter and that the amendments to the claims are fully supported by the specification.

Accordingly, Applicants respectfully submit that with the claim amendments and preceding remarks, the § 112 rejection has been traversed.

CONCLUSION

In view of the foregoing, the application is now believed to be in condition for formal allowance. Prompt and favorable action is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Gary M. Butter', is written over a horizontal line.

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